

## High blood pressure linked to steeper decline in walking speeds in seniors

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Researchers have found a link between high blood pressure and a greater drop in average walking speeds in older adults, according to results from a new National Institutes of Health-funded study. The drop seems to occur even in study participants whose high blood pressure is successfully treated. Drastic changes in walking speed can impact a senior's ability to remain independent and indicate possible health problems.

The study examined the role of brain, heart, and kidney function in changes in seniors' [walking](#) speeds over 14 years. Participating seniors, with an average age of 76 at the start of the study, who had [high blood pressure](#), saw their average walking speeds decline 0.2 miles per hour more than seniors who did not have high blood pressure. The study will appear in the March edition of the *Journal of the American Geriatric Society*.

"The findings from this study suggest an additional reason to stress prevention of high blood pressure," said Susan B. Shurin, M.D., acting director of the National Heart, Lung, and Blood Institute (NHLBI), part of the NIH. "Even with medications to treat high blood pressure in [older adults](#), it appears that the condition might be linked to a serious decline in average walking speed. As the mobility of seniors declines, there is an increased risk for falls."

About one-third of adults in the United States have high blood pressure, also known as hypertension, which can lead to coronary heart disease,

heart failure, stroke, and kidney failure.

The University of Pittsburgh's Caterina Rosano, M.D., led the research as part of the Cardiovascular Health Study, which the NHLBI began funding in 1989 to help understand risk factors for cardiovascular disease in older adults.

Of the 643 participants in Rosano's study, 350 did not have high blood pressure, while 293 had undiagnosed hypertension or were taking medication for the condition. The study's hypertension participants were split into three groups:

- Those who were undiagnosed before the study began
- Those who were diagnosed and were able to control the condition
- Those who were diagnosed and were unable to control the condition

The researchers measured how long it took participants to walk a 15-foot course, starting from a standing position. At the start of the study, the average walking speed was 2.2 mph. While everyone who participated in the follow-up period walked slower, speeds decreased more steeply among all hypertension groups by about 10 percent.

"An acceptable walking speed is important for seniors to maintain their independence," Rosano explained. "For [seniors](#), a declining walking speed can be an indicator of other health problems and can help predict who will develop dementia or disabilities."

Rosano said further study is needed to better understand the physical link between high blood pressure and the steep decline in walking

speeds. Researchers thought that brain, kidney, or heart problems might account for the slowing, but magnetic resonance imaging (MRI) brain scans of study participants showed no visible problems with blood vessels in the brain, and kidney and heart function also appeared normal.

Future studies could use more advanced brain imaging equipment, which may reveal damage too small for MRI scans to detect, according to the study authors.

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